

## Chapter 4: Section 4(f) Evaluation

### 4.1 INTRODUCTION

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303, declares that “It is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that “the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if —

- i) there is no prudent and feasible alternative to using that land; and
- ii) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.”

Section 4(f) further requires consultation with the USDOJ and, as appropriate, the involved offices of the Departments of Agriculture and Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with SHPO is also needed.

“Use” is defined in 23 CFR 771.135(p) as follows:

“(1) Except as set forth in paragraphs (f), (g)(2), and (h) of this section, “use” (in paragraph (a)(1) of this section) occurs:

- i) When land is permanently incorporated into a transportation facility.
- ii) When there is a temporary occupancy of land that is adverse in terms of the statute's preservationist purposes as determined by the criteria in paragraph (p)(7) of this section; or
- iii) When there is a constructive use of land.

(2) Constructive use occurs when the transportation project does not incorporate land from a Section 4(f) resource, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features or attributes of the resource are substantially diminished."

## **4.2 DESCRIPTION OF PROPOSED ACTION**

The proposed action includes roadway improvements to approximately 3.5 miles of SR-68 (Redwood Road and 500 South) in Davis County, Utah. The project is located approximately three miles north of Salt Lake City (see **Figure 1-1**). The project begins along Redwood Road just south of the intersection with 2600 South in Woods Cross and continues along 500 South to the I-15 southbound ramps in West Bountiful. The majority of this section of SR-68 is a two-lane road, within a ROW that varies between 66 feet and 100 feet. The proposed action includes two travel lanes in each direction with a center median and at-grade crossings of the UPRR/Commuter Rail and D&RGW rail lines.

### **4.2.1 Purpose and Need**

The purpose of the project is to improve future corridor mobility and accommodate future travel demand through the design year 2030. SR-68 needs to continue to function as a major (urban principal) arterial that serves the communities of Woods Cross and West Bountiful and help connect nearby major transportation facilities (transit, freeways, highways, and trail systems). To achieve these objectives, the project needs to improve future mobility, alleviate congestion, improve operating conditions, provide safe ingress and egress to adjacent land uses, facilitate safe turning movements, accommodate multi-modal uses, and correct geometric/drainage problems. Please refer to **Chapter 1** for further information.

### **4.2.2 Alternatives**

#### **4.2.2.1 No Build Alternative**

The No Build Alternative includes capital improvements necessary to maintain the existing corridor (e.g. resurfacing the roadway). The No Build Alternative does not include major or minor reconstruction projects. For example, it does not include adjustments to the horizontal or vertical alignment, nor widening of the roadway surface for increased shoulders, curb and gutter, sidewalks, or additional travel lanes. Please refer to **Chapter 2** for further information.

#### **4.2.2.2      TSM Alternative**

The TSM Alternative assumed SR-68 would remain with one travel lane in each direction; however, other transportation system improvements such as adding turning lanes, extending turn pockets, intersection signalization, signal timing optimization, traffic channelization, and access management measures were included in this scenario. This scenario maximizes operations at intersections along the corridor without adding additional lane capacity. This scenario was considered with and without a UPRR grade separation. Traffic conditions associated with the TSM Alternative are compared to the No Build and Build Alternative in **Section 2.4.3**. The traffic conditions under this scenario do not measurably improve. Intersection and railroad crossing improvements provide slightly less delay at the intersections, but the majority of intersections would continue to operate at LOS F. The travel speed along the corridor under this scenario does not appreciably increase, since no new capacity is introduced. Geometric and drainage deficiencies outlined in the No Build would remain with the TSM Alternative. For these reasons, this alternative does not meet the purpose and need or other project objectives and is no longer under consideration as a stand alone alternative. However, applicable elements of the TSM alternative are included the Build Alternative as described in **Section 4.2.2.3**.

#### **4.2.2.3      Build Alternative**

As illustrated in **Figures 2-3** through **2-6**, the Build Alternative includes a five-lane corridor with at-grade crossings of the UPRR/Commuter Rail and DR&GW rail lines within a 110-foot ROW typical section along a meandered alignment. Turn lanes, extended turn pockets, intersection signalization, signal timing, and access management, as included in the TSM Alternative, are also included in this Build Alternative. Between 800 West and 700 West, to minimize impacts in this tightly constrained section of the corridor, there is an option for a 94-foot ROW typical section.

The 110-foot ROW includes 12-foot shoulders that would meet all the objectives outlined by AASHTO for well-designed shoulders (AASHTO, 2004). The 12-foot shoulders would provide a place for a vehicle to stop because of mechanical difficulties or emergencies and to conduct evasive maneuvers to avoid potential crashes. They would provide a sense of openness that would contribute to driver comfort, as well as improve sight distance and lateral clearance from obstructions, thereby increasing safety. The 12-foot shoulders would provide space for maintenance operations (e.g., snow removal and storage) and allow for safer use by bicycles, pedestrians, mail delivery, and buses. Additionally, the 12-foot shoulder would accommodate deceleration associated with turning movements.

The 94-foot ROW Option includes four-foot shoulders between 800 West and 700 West. The 94-foot ROW Option has the same operational capacity benefits as the 110-foot ROW since the number of travel lanes are the same. However, since only the minimum AASHTO guidance for shoulder width is achieved between 800 West and 700 West, the benefits provided by the shoulders in this short section are limited under this option (see previous paragraph for further detail). The 94-foot ROW Option decreases the number of business relocations from five to one. None of these businesses are Section 4(f) properties.

Please refer to **Chapter 2** for further information about the Build Alternative and the alternative development process.

#### **4.2.2.4      Preferred Alternative**

The Preferred Alternative is the 110-foot ROW with the 94-foot ROW Option between 800 West and 700 West. The 94-foot ROW Option was selected because it provides a context sensitive solution for the tightly constrained section of the project between 800 West and 700 West. As explained in **Section 2.4.4**, the 94-foot option for this short section of roadway has the same operational capacity benefits as the 110-foot ROW, eliminates four business displacements, and reduces utility conflicts.




### **4.3      SECTION 4(F) APPLICABILITY**




**Table 4.3-1** summarizes Section 4(f) applicability of recreational resources. **Table 4.3-2** identifies the 15 historic properties that are on or eligible for the NRHP. Of these properties, UDOT and FHWA have determined that Section 4(f) considerations apply to the 15 historic properties. The location of these properties in relationship to the project is shown in **Figures 2-5** and **2-6**. (Please note that the location of Site 42Dv67 is protected by law and not shown for this reason). **Section 4.4** addresses the 11 resources for which FHWA is considering the impact to be *de minimis*. The historic property located at 772 West 500 South in West Bountiful is more fully evaluated in **Section 4.5**. Since there would be no Section 4(f) use of the remaining 3 properties (i.e., Site 42Dv67, 1524 West 500 South, and 2125 South 1800 West in Woods Cross), they are not discussed further in this chapter.




**TABLE 4.3-1: SECTION 4(F) APPLICABILITY OF RECREATIONAL RESOURCES**

<b>Name of Potential Resource</b>	<b>Location</b>	<b>Status/Ownership</b>	<b>Section 4(f) Applies (yes/no)</b>
Legacy Park (Proposed)	West of Redwood Road north of 1500 South	This park is proposed in the Woods Cross General Plan. A portion of land is privately owned by Thalman Properties and Terrance Price. Current development (Woods Cross City Shops) on the city owned portion precludes recreation use of this area.	No
Woods Cross Regional Field Sports Complex (Proposed)	East of Redwood Road, north of 1500 South	This park is proposed in the Woods Cross General Plan. Currently, the land is in private ownership with multiple owners and developed for commercial uses (e.g., Maverick Country Store, and Bikesellerz).	No
Open Space Buffer (Proposed)	Parallel Redwood Road on the west side	The 300-foot open space buffer identified in the Woods Cross General Plan along Redwood Road will likely be a 40-foot buffer based on recent negotiations with developers. No public easement or lease agreement is planned and the land would remain privately owned (Stephens, September 29, 2005).	No
Sidewalks and street trails (Proposed)	See <b>Figure 3-4</b>	Intermittent sidewalks currently exist. A system of sidewalks and a variety of street trails are planned that would be in public ownership (UDOT, City, or County owned). The primary purpose of this system is for transportation.	No
A-1 / A1-A Trail (Proposed)	A1-A drain crosses 500 South at about 1500 West. A1 drain crosses Redwood Road at about 1900 South.	The A-1 / A1-A trail would follow the A-1 and A1-A drains. According to Davis County's GIS tax parcel data, the land is in private ownership. Public easements exist for the primary purpose of draining adjacent agricultural fields. The A1 and A1-A drains are managed by the USDOI, who is allowing the city to pipe these drains so that this land may also be used as a linear trail. The city is asking developers to include this as part of their site planning process (Stephens, September 29, 2005).	No
D&RGW Rail Trail (Proposed)	D&RGW at 500 South	The D&RGW Rail Trail is currently undeveloped, but in 2002 UTA purchased the D&RGW track north of 500 South. South of 100 North in West Bountiful and Woods Cross, the ROW is still privately owned, and the cities do not expect the D&RGW Rail Trail to cross 500 South.	No*
*Section 4(f) does not apply to the proposed recreation use of the D&RGW; however, this site is also a historic property (see Site 42Dv86 in <b>Table 4.3-2</b> ).			




**TABLE 4.3-2: HISTORIC PROPERTIES THAT ARE ON OR ELIGIBLE FOR THE NRHP**

Site / SHPO Rating/ NRHP Eligibility	Photo	Description	Section 4(f) Applies (yes/no)
Site 42Dv67 Eligible under Criterion D		Remains of a homestead, which consists of building foundations, depressions, artifact scatters, and landscape features.	Yes (no use)
Site 42Dv86 Entire line is eligible under Criterion A		Denver and Rio Grande Western railroad (early 1880s). The site at the segment in question consists of a modern standard gauge double track, a modern siding track, and a small historic shed of unknown function (see <b>Figure 4-1</b> ).	Yes (see <b>Section 4.4</b> )
Site 42Dv87 Entire line is eligible under Criterion A		Union Pacific Railroad (1897-present) (see <b>Figure 4-2</b> ).	Yes (see <b>Section 4.4</b> )
680 West 500 South, West Bountiful B-rated Eligible under Criterion C		A 1959 Ranch/Rambler residence of general Post WWII and Ranch style; clad in brick (type: other); single story; modifications are limited and include the replacement of the historical windows with modern windows in the original openings; no outbuildings were observed on this property. This property retains integrity of location, workmanship, design, feeling, and association. The integrity of setting has been compromised by the construction of I-15 adjacent to the property and modern commercial development nearby. The integrity of material is largely intact, though modern windows have compromised this slightly (see <b>Figure 4-3</b> ).	Yes (see <b>Section 4.4</b> )
715 West 500 South, West Bountiful B-rated Eligible under Criterion C		A 1955 service bay/warehouse commercial building of general Post WWII style; clad in corrugated metal siding; single story; modifications include a lean-to style side addition (which may be in-period) and the enclosure of several of the warehouse style window openings; one non-contributing outbuilding was observed on the property. This property retains integrity of location, workmanship, feeling, and association. The integrity of setting has been compromised by modern commercial development nearby. The integrity of material is largely intact, though the use of modern windows in some openings has compromised this slightly. The integrity of design has also been compromised slightly by the lean-to addition, although the addition may be in-period (see <b>Figure 4-4</b> ).	Yes (see <b>Section 4.4</b> )
772 West 500 South, West Bountiful B-rated Previously determined Eligible under Criterion C		A former 1926 bank building converted into a residence; Vault floor plan with simple Victorian stylistic elements; clad in regular brick; single story; modifications are generally limited and include the construction of a small lean-to side addition and the conversion of a former doorway in the main façade into a window opening; 3 non-contributing outbuildings were observed on the property. This property retains integrity of location, workmanship, design, feeling, and setting. The integrity of	Yes (see <b>Section 4.5</b> )

Site / SHPO Rating/ NRHP Eligibility	Photo	Description	Section 4(f) Applies (yes/no)
		material is largely intact, though the use of modern windows has compromised this slightly. The integrity of association has also been compromised slightly by the conversion of this former bank into a residential property; however, the building remains a local landmark for its former financial function (see <b>Figure 4-12</b> ).	
915 West 500 South, West Bountiful  A-rated  Eligible under Criterion C		A 1950 WWII-Era Cottage residence of Minimal Traditional and general Early Ranch style; clad in striated brick, with original wide aluminum siding in the gables; single story; no notable modifications; one non-contributing outbuilding was observed on the property. This property retains integrity of location, setting, feeling, design, workmanship, materials, and association (see <b>Figure 4-5</b> ).	Yes (see <b>Section 4.4</b> )
1057 West 500 South, West Bountiful (aka 1067)  B-rated  Eligible under Criterion C		A 1950 service bay business commercial building of general Post-WWII style; clad in concrete block and striated brick; single story; modifications are minor and include the replacement of a few original windows with modern aluminum frame sliding windows and the installation of a modern aluminum frame commercial door in the main façade; no outbuildings were observed. This building retains integrity of location, design, feeling, workmanship, and association. The property's integrity of setting has been compromised by conversion of the property into a plant nursery. The integrity of material is largely intact, though the use of modern windows and doors in some openings has compromised this slightly (see <b>Figure 4-6</b> ).	Yes (see <b>Section 4.4</b> )
1524 West 500 South, Woods Cross  B-rated/ Eligible under Criterion C		A 1945 WWII-Era Cottage residence of general Minimal Traditional style; clad in striated brick and wood sheet siding; single story with basement; modifications include replacement of some original windows and a small rear addition clad in stucco; three non-contributing outbuildings were observed on the property. This building retains integrity of location, workmanship, and association. The property's integrity of feeling and setting has been compromised by conversion of the associated land parcel into commercial/industrial use. The integrity of design has been compromised slightly by the small rear addition, the age of which is unclear. The building's integrity of material is largely intact, though the use of modern windows in some openings and the use of stucco on the rear addition have compromised this slightly (see <b>Figure 2-5</b> ).	Yes (no use)

Site / SHPO Rating/ NRHP Eligibility	Photo	Description	Section 4(f) Applies (yes/no)
836 South 1800 West, Woods Cross  B-rated/ Eligible under Criterion C		Part of a communal complex, a 1935 clipped gable cottage residence of general early 20th century style; clad in drop/novelty siding; single story; modifications are minor and include the replacement of all original windows and doors in the original openings, a rear addition that appears to be in-period, and a probable out-of-period front porch addition; no outbuildings were observed in direct association with this residence. This building retains integrity of location, setting, feeling, workmanship, and association. The property's integrity of design has been compromised by the addition of the raised out-of-period front porch to the main façade. The rear addition appears in-period and would not be considered to compromise integrity of design. The integrity of material is largely intact, though the use of modern windows and doors in the original openings has compromised this slightly (see <b>Figure 4-7</b> ).	Yes (see <b>Section 4.4</b> )
946 South 1800 West, Woods Cross  B-rated/ Eligible under Criterion C		Part of a communal complex, a 1940 WWII-Era Cottage of general Post-WWII style; constructed of concrete block; single story; modifications are minor and include the replacement of original windows with modern windows of a different type/appearance and removal of the entire front porch assembly (deck and awning); no outbuildings were observed in direct association with this residence. This building retains integrity of location, setting, feeling, workmanship, and association. The property's integrity of design has been compromised by the removal of the front porch. The integrity of material is largely intact, though the use of modern windows and doors in some openings has compromised this slightly (see <b>Figure 4-8</b> ).	Yes (see <b>Section 4.4</b> )
1650 South 1800 West, Woods  B-rated/ Eligible under Criterion C Cross		A 1915 crosswing residence of general Victorian style; clad in regular brick; two-story; modifications are reasonably minor and include the alteration of the front entryway (an enclosed area has been constructed under the porch and extending off of the front entryway, possibly to create a mud room), the replacement of most of the original wood frame windows with aluminum frame windows of similar type, and an in-period rear addition; 8 contributing agricultural outbuildings are observed on this property. This building retains integrity of location, setting, feeling, workmanship, and association. The property's integrity of design has been compromised by slightly by the alteration of the front entry. The rear addition appears to be in-period and would not be considered to affect integrity of design. The properties integrity of material is largely intact, though the use of modern windows and doors in some openings has compromised this slightly (see <b>Figure 4-9</b> ).	Yes (see <b>Section 4.4</b> )



Site / SHPO Rating/ NRHP Eligibility	Photo	Description	Section 4(f) Applies (yes/no)
2018-2020 South 1800 West, Woods Cross  B-rated/ Eligible under Criterion C		A 1910 Central block with projecting bays residence exhibiting general Victorian and early 20 <sup>th</sup> century style; clad in regular brick and drop siding; single story; modifications include an in-period side addition that is visually distinctive from the original building, a small rear addition, and replacement of some original wood frame double-hung windows with aluminum frame double-hung windows; two contributing outbuildings are present on the property. This building retains integrity of location, setting, feeling, design, workmanship, and association. The building's integrity of material is largely intact, though the use of modern windows in some openings has compromised this slightly see <b>Figure 4-10</b> ).	Yes (see <b>Section 4.4</b> )
2125 South 1800 West, Woods Cross  B-rated/ Eligible under Criterion C		A 1960 service bay/warehouse building apparently associated with the adjacent airport; exhibits general Post-WWII style; clad in regular brick; two-story; modifications are minor and include installation of a modern roll-up service bay door and a modern awning over the main pedestrian entryway; no outbuildings were observed on this property. This building retains integrity of location, design, feeling, workmanship, and association. The property's integrity of setting has been compromised by construction of the modern airport office building adjacent to the property. The integrity of material is largely intact, though the use of modern windows and doors in some openings has compromised this slightly (see <b>Figure 2-5</b> ).	Yes (no use)
2595 South 1800 West, Woods Cross  A-rated/ Eligible under Criterion C		A 1955 Ranch/Rambler residence of general Ranch/Rambler style; clad in striated brick; single story; no notable modifications; no outbuildings were observed on the property. This property retains integrity of location, setting, feeling, design, workmanship, materials, and association (see <b>Figure 4-11</b> ).	Yes (see <b>Section 4.4</b> )

## 4.4 DE MINIMIS FINDINGS

Under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the agency can comply with Section 4(f) in a streamlined manner by finding that the program or project will have a *de minimis* impact on the area. *De minimis* impacts related to historic sites are defined as the determination of either “no adverse effect” or “no historic properties affected,” in compliance with Section 106 of the National Historic Preservation Act with the concurrence of SHPO and or the THPO, and ACHP if participating in the Section 106 consultation. Furthermore, the SHPO, THPO,

and/or ACHP, as applicable, must be informed of FHWA's intent to make a *de minimis* impact finding based on the written concurrence, and FHWA must also consider the views of any consulting parties participating in the Section 106 consultation. As noted in FHWA's guidance on applying the Section 4(f) *De Minimis* Impact Criteria (FHWA, 2006b), the *de minimis* impact finding is based on the degree or level of impact including avoidance, minimization, and mitigation or enhancement measures that are included in the project to address the Section 4(f) use.

Based on the results of the Section 106 process, proposed mitigation measures, and the concurrence of SHPO, the FHWA finds that the proposed action would result in *de minimis* impacts for the 11 Section 4(f) properties listed in **Table 4.4-1**. In a letter dated October 6, 2006 (see **Appendix A**), UDOT, on behalf of FHWA, requested the SHPO's concurrence with its Section 106 determinations and informed the SHPO of FHWA's intent to make *de minimis* impact findings for these 11 properties. The historic boundaries and relationship of the project to each of these properties is included in **Figures 4-1 through 4-11**.

**TABLE 4.4-1: DE MINIMIS IMPACTS**

Site Description	Impacts	Finding of Effect	Nature of <i>De Minimis</i> Impact	Avoidance and Other Measures Included in Build Alternative
Site 42Dv86 D&RGW Railroad	The existing ROW includes 102 linear feet of rail line. A Permanent Easement for an additional 18 linear feet is needed for the reconstruction and widening of the roadway approach and cut / fill slope.	No Effect	Permanent Easement	None necessary
Site 42Dv87 Union Pacific Railroad	The existing ROW includes 69 linear feet of rail line. A Permanent Easement for an additional 57 linear feet is needed for the reconstruction and widening of the roadway approach and cut / fill slope.	No Effect	Permanent Easement	None necessary
680 West 500 South, West Bountiful Residence	Strip take consisting of 516 square ft of existing ROW, 3,355 square ft of new ROW, 592 square ft of Permanent Easement, and 403 square ft of Temporary Construction Easement. Property is required to accommodate cut slope, sidewalk, curb and gutter, and roadway.	No Adverse Effect	New ROW and Permanent Easement	Meandered alignment

Site Description	Impacts	Finding of Effect	Nature of <i>De Minimis</i> Impact	Avoidance and Other Measures Included in Build Alternative
715 West 500 South, West Bountiful Warehouse	Strip take consisting of 1,014 square ft of new ROW (910 square ft with 94' ROW Option), 503 square ft of Permanent Easement (311 square ft with 94' ROW Option), 372 square ft of Temporary Construction Easement (309 square ft with 94' ROW Option). Property is required to accommodate cut / fill slope, driveway tie-in, sidewalk, curb and gutter, and roadway.	No Adverse Effect	New ROW and Permanent Easement	Meandered alignment
915 West 500 South, West Bountiful Residence	Strip take consisting of 339 square ft of existing ROW, 1,006 square ft of new ROW, 643 square ft of Permanent Easement, and 302 square ft of Temporary Construction Easement. Property is required to accommodate fill slope, driveway tie-in, sidewalk, curb and gutter, and roadway.	No Adverse Effect	New ROW and Permanent Easement	None necessary
1057 West 500 South, West Bountiful (aka 1067) Commercial Building	Strip take consisting of 1,996 square ft of existing ROW, 922 square ft of Permanent Easement, and 746 square ft of Temporary Construction Easement. Property is required to accommodate cut / fill slope, two driveway tie-ins, sidewalk, curb and gutter.	No Adverse Effect	Permanent Easement	Meandered alignment
836 South 1800 West, Woods Cross Residence (Part of Communal Complex)	Strip take consisting of 2,762 square ft of existing ROW, 880 square ft of Permanent Easement, and 902 square ft of Temporary Construction Easement. Property is required to accommodate fill slope, driveway tie-in, sidewalk, curb and gutter, roadway.	No Adverse Effect	Permanent Easement	Meandered alignment
946 South 1800 West, Woods Cross Residence (Part of Communal Complex)	Strip take consisting of 2,771 square ft of existing ROW, 1,200 square ft of Permanent Easement, and 414 square ft of Temporary Construction Easement. Property is required to accommodate fill slope, driveway tie-in, sidewalk, curb and gutter, roadway.	No Adverse Effect	Permanent Easement	Meandered alignment
1650 South 1800 West, Woods Cross Residence	Strip take along both parcels consisting of 2,630 square ft of new ROW, 4,420 square ft of Permanent Easement, and 1,523 square ft of Temporary Construction Easement. Property is required to accommodate fill slope, driveway tie-in, sidewalk, curb and gutter.	No Adverse Effect	New ROW and Permanent Easement	None necessary

Site Description	Impacts	Finding of Effect	Nature of <i>De Minimis</i> Impact	Avoidance and Other Measures Included in Build Alternative
2018-2020 South 1800 West, Woods Cross Residence	Strip take consisting of 31,736 square ft of existing ROW, 12,375 square ft of new ROW, 16,401 square ft of Permanent Easement, and 7,125 square ft of Temporary Construction Easement. Property is required to accommodate detention basin, cut / fill slope, sidewalk, curb and gutter, three driveway tie-ins, and roadway.	No Adverse Effect	New ROW and Permanent Easement	None necessary
2595 South 1800 West, Woods Cross Residence	Strip take along all three parcels consisting of 203 square ft of existing ROW, 4,530 square ft of new ROW, 6,320 square ft of Permanent Easement, and 2,228 square ft of Temporary Construction Easement. Property is required to accommodate fill slope, driveway tie-in, sidewalk, curb and gutter.	No Adverse Effect	New ROW and Permanent Easement	None necessary

Note: Historic boundaries and acreage calculations are based on county parcel data and preliminary engineering. Discrepancies exist between county parcel data and ROW data. As such, some historic boundaries overlap the existing ROW, which is already used for transportation purposes. Section 4(f) also does not apply to the temporary construction easements.

## 4.5 SECTION 4(F) EVALUATION OF 772 WEST 500 SOUTH

### 4.5.1 Description of Section 4(f) Property



This property is accessed from 500 South, immediately east of the UPRR line. This single story building has a vault floor plan with simple Victorian stylistic elements, clad in regular brick. Modifications are generally limited and include the construction of a small lean-to side addition and the conversion of a former doorway in the main façade into a window opening. Three non-contributing outbuildings were observed on the property. This property retains integrity of location, workmanship, design, feeling, and setting. The integrity of material is largely intact, though the use of modern windows has compromised this slightly. The integrity of association has also been compromised slightly by the conversion of this former bank into a residential property. This property was previously determined eligible under Criterion C, and the historic boundary includes the current legal parcel boundary that encompasses approximately 0.5 acres of land.

## **4.5.2 Use of Section 4(f) Property**

**Figure 3-12** and **4-12** show the property in relationship to the project. Full acquisition of this property is expected. Construction of either the 110-foot ROW or 94-foot ROW Option would require a physical impact and removal of the historic building located on this site.

## **4.5.3 Avoidance Alternatives for Section 4(f) Property**

Avoidance alternatives considered for the property located at 772 West 500 South include the No Build Alternative, alignment shifts, and design options as addressed in the following sections.

### **4.5.3.1 No Build Alternative**

The No Build Alternative is not prudent because it does not meet the following safety and operational aspects of the purpose and need objectives:

- The No Build Alternative does not provide the necessary capacity improvements that would allow SR-68 to function as a major arterial and serve the cities of Woods Cross and West Bountiful through the 2030 design year.
- This alternative also does not address access management or provide for the separation of turning movements from the through traffic.
- The No Build Alternative does not correct deficiencies that would increase the safety of the motorists, pedestrians, or bicyclists using the corridor.
- Drainage problems would also continue to exist.

### **4.5.3.2 Widen 500 South to the South**

As shown in **Figure 4-13**, this alternative would provide improvements on 500 South by widening entirely to the south of this property. This alignment uses the corridor design criteria of 40 mph. However, such an alignment is not prudent because it would result in unique impacts and costs that would reach extraordinary magnitude, as outlined below:

- The recently completed UPRR/Commuter Rail switching station located just south of 500 South would be impacted by a southerly shift. The placement of this switch is directly related to the Woods Cross station platform. To tie in with this passenger loading area, the switching station would need to be relocated north of 500 South. Relocating the switching station would require an additional set of tracks across 500 South just east of the existing UPRR/Commuter Rail tracks. Signal locations and housings would also need

to be redesigned and constructed (Scanlon, September 11, 2007, included in **Appendix A**). North of 500 South, the existing railroad right-of-way is not wide enough to accommodate the additional track. Since the historic property at 772 West is immediately adjacent to both 500 South and the UPRR property, impacts to this property are unavoidable. A strip of right-of-way would be required totaling approximately 3130 square feet and bringing the new right-of-way within about 5 feet of the northwest corner of the building (Burgess, September 27, 2007, included in **Appendix A**). The length and width of the driveway would also be reduced. Another unique impact associated with establishing this additional set of tracks is that the ingress to the Holly Energy Partners (HEP) Fueling Terminal would be closed. Without this ingress, the HEP Fueling Terminal and associated Holly Refinery utilities would require relocation. Costs associated with these relocations are discussed in the next bullet.

- Widening 500 South to the south would require relocating the HEP Fueling Terminal and Holly Refinery utilities associated with the HEP Fueling Terminal. The southerly shift would reduce the existing offset from the roadway to the truck bays. This offset is already the minimum distance that allows trucks to be filled. The costs associated with these relocations would reach extraordinary magnitude. Costs were evaluated with representatives from Holly Refining and Marketing in 2006 as part of the evaluation of alternatives for grade-separated crossing options. Continued discussions in 2007 conservatively estimate the relocation costs for the HEP



*UPRR/Commuter Rail Switching Station*



*HEP Fueling Terminal*



*Foreground - Holly Refinery Utilities  
Background - Building at 772 West*

Fueling Terminal at \$6 Million, and relocating the associated Holly Refinery utilities at \$4 Million. Lost revenue for the HEP Fueling Terminal for shut down is estimated at \$4,000 per day, and third party trucking companies that fill at this terminal may also experience a loss of revenue (Jelmini, September 19, 2007, included in **Appendix A**). Additionally, if relocated, an agreement would need to be made between Holly Refinery and the Pioneer Terminal in North Salt Lake to allow Holly Refinery to meet their delivery schedules. Holly Refinery may have to alter their fuel additive packages for this agreement to be reached. If this agreement is not made, Holly Refinery would need to slow operations, creating a loss of up to one half of their profits.

In summary, although this alternative is feasible it is not prudent because it would result in unique impacts and costs that would reach extraordinary magnitude. Unique impacts are related to the relocation of the UPRR/Commuter Rail switching station that would require the construction of an additional set of tracks across 500 South which in turn would impact the historic property at 772 West. Extraordinary costs are associated with the cost of relocating the HEP Fueling Terminal and associated Holly Refinery utilities, as well as the costs of the switching station relocation and tracks. These costs exceed \$11.5 Million. In addition, there would be interruption in fuel deliveries and costs associated with lost revenues from those deliveries.

#### **4.5.3.3      Realign 500 South to the North**

As shown in **Figure 4-13**, this alternative would realign 500 South approximately 380 feet to the north, between 700 West and 800 West. This alignment is not prudent because it would not achieve the safety and operational aspects of the purpose and need objectives for the following reasons:

- Four additional tight horizontal curves on maximum super elevation would be required. These types of curves are undesirable from a safety perspective because of the high volume of traffic, especially trucks, using this road.
- Major safety hazards, particularly related to inadequate sight distance, would be introduced by having major accesses (i.e., 700 West and 800 West) on a curve. Major approach queues associated with the UPRR/Commuter Rail line and I-15 would also be on a curve.
- The existing 500 South would also need to be maintained to provide access to the existing commercial area. This would introduce additional intersections in close proximity to I-15, 700 West, 800 West, and the UPRR/Commuter Rail line. Not only is this a safety concern, but the close spacing and offset intersections also affect traffic operations throughout this section.

- An additional at-grade crossing of the UPRR/Commuter Rail line would be required. Because of safety concerns, UDOT policy does not allow new crossings without closing existing crossings. Additionally, the location of the new crossing would disrupt the current operations associated with switching and storage of rail cars.
- The alignment would create a circuitous route that would be approximately 35% longer than the existing roadway through the same section.
- The roadway realignment would cross spur tracks, as well as the UPRR mainline and UTA Commuter Rail line. The existing spur tracks provide access to the petroleum storage tanks and would need to be relocated because switching and storage of rail cars would prohibit traffic flow on 500 South. The realignment of the spur tracks would alter the functionality of the petroleum facility and would require redevelopment of the portion of the Holly Refinery east of 800 West.

Not only does this avoidance alternative not meet the project's purpose and need, but in addition it would have the following problematic impacts:

- The drainage box culvert structure for the Mill Creek Canal would need to be extended approximately 120 feet to accommodate the roadway over the top of the canal.
- Over two acres of additional right of way would be required for this alignment. The Holly Refinery property located on the northeast corner of 800 West and 500 South by the UPRR line would be segmented, resulting in two remnant parcels totaling another 0.67 acres. The business at 698 West, seven businesses within the West Bountiful Business Park located at 724 West, and three business storage facilities immediately north of the business park would also be displaced.

#### **4.5.3.4      Realign 500 South to the South**

As shown in **Figure 4-13**, this alternative would realign 500 South 635 feet to the south (following the alignment associated with 700 West). This alignment is not prudent because it would not meet the purpose and need objectives for the following reasons:

- Four additional tight horizontal curves on maximum super elevation would be required. These types of curves are undesirable from a safety perspective because of the high volume of traffic, especially trucks, using this road.
- Major safety hazards would also be introduced by having major accesses (i.e., 800 West) align with the new south alignment for 500 South on a curve.



- Major approach queues associated with the UPRR and Commuter Rail line and I-15 would also be on a curve.
- The existing 500 South would need to be maintained to provide access to the existing commercial area. This would introduce additional intersections in close proximity to I-15, 700 West, 800 West, and UPRR. Not only is this a safety concern, but the spacing of these intersections would also affect traffic operations throughout this section.
- An additional at-grade railroad crossing would be required. The new crossing would result in a high-skewed crossing of the UPRR mainline that would result in a safety concern. The Commuter Rail platform is also proposed at this location.
- The alignment would create a circuitous route that would be approximately 75% longer than the existing roadway through the same section.
- The alignment would impact the proposed Commuter Rail platform, as well as crossing and switching operations. Unless the station is relocated, these operations would increase traffic delays on the corridor while trains are stopped on the roadway to load and unload passengers. In addition to pedestrian traffic associated with passengers being loaded and unloaded, passengers accessing the parking east of 800 West would have to cross the 500 South corridor, creating additional safety concerns.

Not only does this avoidance alternative not meet the project's purpose and need objectives, but in addition it would have the following problematic impacts:

- The power substation would require reconstruction and the planned expansion of the substation would not be possible.
- Approximately 28% of the parking facility east of the proposed rail station would be directly lost. If the station is relocated to another site, the proposed TOD development in this area would also be affected.
- The gas station on the southeast corner of 500 South and 700 West would be displaced.
- Additional ROW required would increase by just over one acre.

#### **4.5.3.5      Design Options**

Typical sections as narrow as 83 feet were considered, along with other design options (such as steepening cut/fill slopes and the use of retaining walls). However, none of the

narrower typical sections or other design options resulted in avoidance of the eligible building associated with this property.

#### **4.6 MEASURES TO MINIMIZE HARM TO SECTION 4(F) PROPERTIES**

Mitigation will be conducted in accordance with the MOA (included in **Appendix A**). Pursuant to 36 CFR 800.6, measures that minimize the effects of the project on the historic qualities of the adversely affected property located at 772 West 500 South, West Bountiful, have been developed in consultation with SHPO. UDOT has also solicited the views of interested parties. Proposed mitigation for this property includes:

- Documentation of the historic property to the Utah State Intensive Level Survey (ILS) Standards in advance of construction activity; and
- Off-site project consisting of multiple property context/submission and nominations for the eligible carriage houses in West Bountiful.

The MOA also includes stipulations for planning, discovery, and monitoring; review of implementation and measures for dispute resolution; and provisions specific to the Utah Native American Graves Protection & Repatriation Act (UNAGPRA).

UDOT Standard 01355 Environmental Protection Part 1.10 - Discovery of Historic, Archaeological, and Paleontological Resources, applies to this project and stipulates instructions to the contractor for the protection of any archaeological, historical, or paleontological resource discovered in the course of construction. Should a discovery occur, UDOT will consult with SHPO and relevant Consulting Parties toward developing and implementing an appropriate treatment plan prior to resuming construction.

#### **4.7 COORDINATION**

Impacts, avoidance, minimization, and mitigation measures have been developed in consultation with SHPO and USDOJ (see letters dated October 11, 2006 and October 23, 2006 in **Appendix A**).

#### **4.8 SECTION 4(F) DETERMINATION**

Based on the above considerations, there is no feasible and prudent alternative to the use of land from the historic property located at 772 West 500 South and the proposed action includes all possible planning to minimize harm to this property resulting from such use.